

What is claimed is:

1. An implant for the spinal column, comprising:

an elongated body positionable in a spinal disc space, said body comprising a convexly curved upper surface orientable toward an endplate of an upper vertebra and a
5 convexly lower surface orientable toward an endplate of a lower vertebra:

a leading end portion and an opposite trailing end portion;

a pair of sidewalls extending between said leading end portion and said
trailing end portion;

10 a cavity between said leading end portion, said trailing end portion, and said
sidewalls, said cavity opening at said upper surface and said lower surface of said
body; and

15 wherein said body includes a height between said upper and lower surfaces
corresponding to a desired disc space height between the upper vertebra endplate and the
lower vertebra endplate, wherein said leading end portion is structured for insertion into the
disc space in a collapsed condition and said height is sized to restore the collapsed disc space
to the desired disc space height as the body is inserted in the collapsed disc space.

20 2. The implant of claim 1, wherein said upper surface and said lower surface are
each convexly curved along an entire length of said body.

25 3. The implant of claim 2, wherein said leading end portion includes a nose
rounded between said upper surface and said lower surface.

4. The implant of claim 3, wherein said nose is rounded between said sidewalls.

25 5. The implant of claim 1, wherein said sidewalls are parallel to one another.

6. The implant of claim 1, wherein said body includes:

a first notch in a first one of said sidewalls; and

30 a second notch in a second one of said pair of sidewalls, said first and second notches
opening at a proximal end wall of said body.

7. The implant of claim 6, wherein said proximal end wall is planar and extends between said sidewalls and said upper and lower surfaces.

5 8. The implant of claim 6, further comprising a coupling member having first and second fingers positionable in respective ones of said first and second notches to secure said body to said coupling member.

10 9. The implant of claim 8, wherein said coupling member comprises a distal portion of an insertion instrument.

15 10. The implant of claim 8, wherein a width of said coupling member between outer lateral surfaces of said fingers is less than a width between outer lateral surfaces of said sidewalls at least when said fingers are in said notches.

11. The implant of claim 1, wherein said upper and lower surfaces each include a number of engagement members therealong and projecting outwardly therefrom to engage bony tissue of the adjacent vertebral endplate when said body is positioned in the spinal disc space.

20 12. The implant of claim 11, wherein said engagement members comprise a number of teeth along portions of said sidewalls extending along said cavity.

25 13. The implant of claim 12, wherein said upper and lower surfaces are substantially smooth along said leading end portion and said trailing end portion.

30 14. The implant of claim 12, wherein said teeth each include a leading end wall sloped toward said leading end portion and a trailing end wall opposite said leading wall, said trailing end wall being generally orthogonally oriented relative to the respective one of said convexly curved upper and lower surfaces from which said trailing end wall extends.

15. The implant of claim 14, further comprising a rounded transition surface extending between said leading end wall and said trailing end wall of each of said teeth.

16. The implant of claim 15, wherein said transition surfaces of said teeth along 5 each of said upper and lower surfaces define an arc along said body, said arc defining a first radius.

17. The implant of claim 16, wherein said upper and lower surface each extend along an arc defined by a second radius, said first radius being greater than said second 10 radius.

18. An implant insertable in a disc space between adjacent vertebrae, comprising: an elongated body having a distal leading end portion sized for insertion into a non-distracted, collapsed disc space, said implant having a height between an upper surface and a 15 lower surface thereof adapted to restore said non-distracted, collapsed disc space to a desired disc space height as said body is impacted into said non-distracted collapsed disc space, wherein said body is implantable in the restored disc space to post-operatively maintain said desired disc space height, wherein said body includes:

20 a trailing end portion having a proximal end wall opposite a leading end nose of said body; and

25 said upper surface and said lower surface extend along said leading end portion and said trailing end portion, said upper and lower surfaces each including a convexly curved surface profile between said leading end nose and said proximal end wall of said body.

19. The implant of claim 18, wherein said body includes a cavity extending between 25 said upper and lower surfaces and a pair of opposite sidewalls extending along said cavity between said leading end portion and said trailing end portion.

30 20. The implant of claim 19, wherein said sidewalls are parallel to one another.

21. The implant of claim 18, wherein said leading end nose is rounded between said upper surface and said lower surface.

22. The implant of claim 21, wherein said nose is rounded between opposite 5 sidewalls of said body.

23. The implant of claim 18, wherein said body includes:
a first notch in a first sidewall of said body; and
a second notch in a second sidewall of said body, said first and second notches 10 opening at said proximal end wall of said body.

24. The implant of claim 23, wherein said proximal end wall is planar and extends between said sidewalls and said upper and lower surfaces.

15 25. The implant of claim 23, further comprising a coupling member having first and second fingers positionable in respective ones of said first and second notches to secure said body to said coupling member.

26. The implant of claim 25, wherein said coupling member comprises a distal 20 portion of an insertion instrument.

27. The implant of claim 25, wherein a width of said coupling member between outer lateral surfaces of said fingers is less than a width between outer lateral surfaces of said sidewalls at least when said fingers are in said notches.

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28. The implant of claim 18, wherein said upper and lower surfaces each include a number of engagement members therealong and projecting outwardly therefrom to engage bony tissue of the adjacent vertebral endplate when said body is positioned in the spinal disc space.

29. The implant of claim 28, wherein said engagement members comprise a number of teeth along portions of said sidewalls extending along said cavity.

30. The implant of claim 29, wherein said body includes:

5 a first sidewall and an opposite second sidewall; and
a cavity extending between said upper and lower surfaces, said first and second sidewalls and said leading and trailing end portions extending about said cavity, wherein said upper and lower surfaces are substantially smooth along said leading end portion and said trailing end portion.

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31. The implant of claim 30, wherein said teeth each include a leading end wall sloped toward said leading end portion and a trailing end wall opposite said leading wall, said trailing end wall being generally orthogonally oriented relative to the respective one of said upper and lower surfaces from which said trailing end wall extends.

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32. The implant of claim 31, further comprising a rounded transition surface extending between said leading end wall and said trailing end wall of each of said teeth.

20 33. The implant of claim 32, wherein said transition surfaces of said teeth along each of said upper and lower surfaces define an arc along said body, said arc forming a first radius.

25 34. The implant of claim 33, wherein said upper and lower surface each extend along an arc defined by a second radius, said first radius being greater than said second radius.

35. The implant of claim 18, wherein said upper and lower surfaces each form a smooth, solid contact surface along an entire length of said body for engaging the adjacent vertebral endplate.

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36. An implant insertion assembly, comprising:

an intervertebral implant having upper and lower surface and opposite lateral surfaces extending between said upper and lower surfaces, each of said lateral surfaces having a notch formed therein opening at a proximal end of said implant; and

5 an insertion instrument including a shaft with a distal coupling portion engageable in said notches of each of said opposite lateral surfaces of said implant, said coupling portion including a pair of distally extending and spaced apart fingers each positionable in a respective one of said notches, said fingers including a first position relative to one another for receiving said implant therebetween and a second position wherein said fingers in said notches grip said implant therebetween, wherein in said second position each of said fingers are received in said respective 10 notch without protruding outwardly from said lateral surface adjacent said respective notch.

37. The assembly of claim 36, wherein said lateral surfaces comprise outwardly facing surfaces of opposite sidewalls of said implant.

15 38. The assembly of claim 36, wherein said shaft of said insertion instrument includes an outer shaft with said coupling portion at a distal end of said outer shaft, and an inner shaft extending through said outer shaft, said inner shaft including a distal end extending between said fingers and a proximal end extending proximally from said outer shaft.

20 39. The assembly of claim 38, further comprising a handle adjacent said proximal end of said outer shaft, said inner shaft extending proximally of said handle, and said handle being obliquely oriented to said outer shaft.

25 40. The assembly of claim 38, wherein said inner shaft includes an adjustment member at a proximal end thereof, said adjustment member being operable to rotate said inner shaft in said outer shaft.

41. The assembly of claim 40, wherein said distal end of said inner shaft is threaded for engagement with a threaded hole in a trailing end wall of said implant.

42. The assembly of claim 40, wherein said outer shaft includes a housing portion at said proximal end of said outer shaft, said adjustment member being positioned in said housing portion.

5 43. The assembly of claim 36, wherein said coupling portion includes a body member and said pair of fingers extends distally from said body member on opposite sides thereof.

10 44. The assembly of claim 43, wherein said shaft of said insertion instrument includes an outer shaft with said body member at a distal end of said outer shaft, and an inner shaft extending through said outer shaft and through a passage of said body member, said inner shaft including a distal end extending between said fingers.

15 45. The assembly of claim 43, wherein said shaft of said insertion instrument includes an outer shaft and an inner shaft with said body member at a distal end of said inner shaft, said inner shaft extending through said outer shaft with said body member positioned distally of a distal end of said outer shaft.

20 46. The assembly of claim 45, wherein said body member includes a pair of biasing members spaced from one another with a slot therebetween, said pair of fingers extending distally from respective ones of said biasing members.

25 47. The assembly of claim 46, wherein said pair of biasing members extend distally from a base portion of said body member, said base portion including a proximally tapered outer surface profile, wherein said outer shaft is distally advanceable along said outer surface of said base portion to move said pair of biasing members and said pair of fingers toward one another to grip said implant therebetween.

30 48. The assembly of claim 46, wherein in said first position each of said fingers are disengaged from said implant and received in said respective notch without protruding outwardly from said lateral surface adjacent said respective notch.